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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,005	01/30/2007	Shinobu Izumi	1272-0127PUS1	8958

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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FERGUSON, LAWRENCE D

ART UNIT	PAPER NUMBER
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1783

NOTIFICATION DATE	DELIVERY MODE
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08/19/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,005	<b>Applicant(s)</b> IZUMI ET AL.	
	<b>Examiner</b> Lawrence D. Ferguson	<b>Art Unit</b> 1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 8 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 is/are allowed.
- 6) ☒ Claim(s) 1 and 4-6 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/26/06;9/25/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Election***

1. Applicant's election of claims 1-7, in the reply filed on April 29, 2010, is acknowledged. Claim 8 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 29, 2010. Applicant's request for a rejoinder is acknowledged.

The requirement is deemed proper and is therefore made **FINAL**.

### ***Information Disclosure Statement***

2. The references disclosed within the information disclosure statements (IDS) submitted on September 25, 2006 and December 26, 2006, have been considered and initialed by the Examiner.

### ***Priority***

3. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 1201 121, or 365(c) is acknowledged.

***Claim Rejections – 35 USC 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6, the phrase, "photochromic layer and said inorganic particle dispersion layer" is indefinite. The term 'and' is not a word. Examiner suggests amending the phrase to delete 'and' and replace with the word --and--.

***Claim Rejections – 35 USC § 103(a)***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kumar et al. (U.S. 7,320,826).

Kumar discloses a photochromic optical article comprising a glass substrate (column 22, lines 60-67 and column 23, lines 41-48) comprising photochromic material as a separate coating layer (column 26, lines 1-17). The article can include additional

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coatings as a monolayer or multilayer metal oxide deposited on the photochromic article (column 29, lines 10-17). Kumar discloses the photochromic material can include an indenonaphthopyran compound (column 21, lines 8-19). Because Kumar discloses an indenonaphthopyran compound used for a photochromic compound in an optical article, it would have been expected by one of ordinary skill in the art for the indenonaphthopyran compound to have a structure similar to the structure of formula 8 in instant claim 1. The protective photochromic coatings are used as a primer and protective coating, which functions as an adhesive layer with inorganic material (column 28, lines 33-66). One of the protective/primer coatings functions as a buffer layer, which comprises inorganic material in adhesive material (binder resin). Kumar discloses the thickness of the coatings can vary widely (column 28, lines 1-12). Although Kumar does not disclose the thickness of the optical article layers or mass percent of the inorganic particles, it would have been obvious to one of ordinary skill in the art to add the inorganic particles in any amount and for the layers to have a thickness in any amount, including the claimed amounts, as in claims 1, 4 and 6.

Concerning claim 5, the phrase, "formed by the hydrolysis and condensation of an organosilicon compound" introduces a process limitation to the product claim. For purposes of examination, product-by-process claims are not limited to the manipulation of the recited steps, only the structure implied by the steps. See MPEP 2113. In the present case, the recited steps imply a structure having a photochromic optical article comprising a substrate, a photochromic layer and a metal oxide layer, where the photochromic compound is an indenonaphthopyran compound. The

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reference suggests such a product because Kumar discloses a photochromic optical article comprising a substrate, a photochromic layer and a metal oxide layer, where the photochromic compound is an indenonaphthopyran compound.

8. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The closest prior art does not teach or suggest the recited photochromic optical article further including wherein said thin metal oxide layer is formed by silicon oxide, titanium oxide, zirconium oxide, tin oxide, zinc oxide, cerium oxide, iron oxide or a composite oxide containing these oxide components.

The prior art does not teach motivation or suggestion for modification to make the invention as instantly claimed.

9. Claim 7 is allowed. The prior art of record does not teach or suggest the recited photochromic optical article further including a thin metal oxide layer comprising a silicon oxide layer having a thickness of 0.01 to 10um, where the silicon oxide layer.

The prior art does not teach motivation or suggestion for modification to make the invention as instantly claimed.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample, can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lawrence Ferguson/  
Patent Examiner, Art Unit 1783

/David R. Sample/  
Supervisory Patent Examiner, Art Unit 1783